Format No: CP/TF/01

TEST REPORT ON PHYSICAL REQUIREMENTS OF SOLID CONCRETE BLOCKS

Lab ID	:	**CP-2018-03-05-14** **Date: 09-03-2018**
Customer	:	Assistant Executive Engineer, Shettyhalli Sub Division, BBMP, Bangalore.
Address	:	Shettyhalli Sub Division, BBMP, Bangalore.
Project Name	:	Improvements of Mallasandra Govt School Compound other Development works in Mallasandra ward no. 13, Shettyhalli Sub division.
Agency	:	Technical Manager, KRIDL, No.280, 59th Cross, 17th 'C' Main road, 3rd 'Y' Block Rajajinagar, Bangalore-560010
Customer's Reference	:	BBMP/EE/PD/WO/0035/2017-18
Source of Sample	:	Sample supplied by Agency
Sample Condition	:	Satisfactory
Date of Receipt	:	05-03-2018
Sample ID No	:	2018-03-05-14 /04
Sample Type/Size	:	Solid concrete blocks of size (400X200X200)mm
Reference to BIS codes	:	IS : 2185 (Part 1) : 2005(RA 2010) Concrete Masonry Specification Part 1:Hollow and Solid Concrete Blocks (Dimensions -Annex-B, Clause 9.2 and 10 , Block density Annex -C Clause 9.3 and10, Compressive strength Annex -D Clause 9.4 and 10, Water absorption Annex -E Clause 9.5 and 10)
Date of test	:	06-03-2018

BLOCK DENSITY:

Sl. No.	Measurement of overall Dimensions of Individual Blocks			Overall Volume of the Block in Cubic Centimetres	Weight of Oven Dried Block in Kilograms to the nearest 10 Gram	Block Density in Kg/cum*10^6	Avg.Block Density in (Kg/cum)	As per IS 2185 (Part 1):2005 (RA 2010)
	Length	Breadth	Height					
	mm	mm	mm	(Cm^3)	Kg	Kg/m^3	Kg/m^3	
1	400	201	202	16241	32.480	1999.9	1989.2	Not less than 1800Kg/m^3
2	402	203	203	16566	32.550	1964.9		
3	401	201	202	16281	32.610	2002.9		

WATER ABSORPTION:

Sl. No.	Wet weight after water absorption	Dry weight (Oven dry)	Water Absorption	Avg.Water Absorption	As per IS 2185 (Part 1):2005 (RA 2010)
	kg	kg	%	%	
1	33.590	32.310	3.96	3.82	Shall not be more than 10% by mass
2	33.470	32.280	3.69		
3	33.690	32.450	3.82		

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Lab ID : **CP-2018-03-05-14**

Date: 09-03-2018

Sample ID No : **2018-03-05-14 /04**

DIMENSION ANALYSIS

Sl.no	Length mm	Breadth mm	Height mm	Requirement as per IS 2185(Part 1):2005
1	402	203	201	Length : ± 5mm Breadth : ± 3mm Height : ± 3mm
2	401	201	200	
3	404	203	198	
4	403	201	203	
5	400	203	201	
6	401	201	203	
7	402	202	198	
8	401	200	201	
9	402	201	203	
10	402	203	202	
11	401	201	200	
12	403	203	199	
13	401	201	203	
14	402	200	200	
15	401	199	201	
16	402	201	203	
17	403	202	201	
18	400	203	203	
19	401	201	201	
20	402	203	202	
Average of 20	**402**	**202**	**201**	

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Sample ID No : 2018-03-05-14 /04

COMPRESSIVE STRENGTH:

Sl. No.	Size of solid block		Area	Failure Load	Compressive strength	Average Compressive strength
	Length	Breadth				
	mm	mm	(mm^2)	(KN)	N/mm^2	(N/mm^2)
1	402	203	81606	412.8	5.1	5.4
2	401	201	80601	422.9	5.2	
3	404	203	82012	438.7	5.3	
4	403	201	81003	463.1	5.7	
5	400	203	81200	442.8	5.5	
6	401	201	80601	430.6	5.3	
7	402	202	81204	425.7	5.2	
8	401	200	80200	440.3	5.5	

As per IS Requirements (Table 2, Clause 5.1, 5.2 and 9.4)

Compressive strength		
Grade	Minimum average	Minimum Individual units.
C (5.0)	5.00 N/mm^2	4.00 N/mm^2
C (4.0)	4.00 N/mm^2	3.20 N/mm^2

Note:
The results pertain to the samples received and tested.
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Authorized Signatory
Quality Manager

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Format No: CP/TF/01

TEST REPORT OF CEMENT CONCRETE CUBES

Lab ID : **CP-2018-03-12-16** **Date: 15/03/2018**

Customer : Assistant Executive Engineer, Shettyhalli Sub Division, BBMP, Bangalore.

Address : Shettyhalli Sub Division, BBMP, Bangalore.

Project Name : Improvements of Mallasandra Govt School Compound other Development works in Mallasandra ward no. 13, Shettyhalli Sub division.

Agency : Technical Manager, KRIDL, No.280, 59th Cross, 17th 'C' Main road, 3rd 'Y' Block Rajajinagar, Bangalore-560010

Customer's Reference : BBMP/EE/PD/WO/0035/2017-18

Source of Sample : Sample supplied by Agency

Sample Condition : Satisfactory

Date of Receipt : 12-03-2018

Sample ID No : 2018-03-12-16 /01

Customer ID : PCC

Sample Type /Size : 150X150X150 mm

Sample grade/Age : M15 / 7 Days Compressive Strength

Reference to BIS codes : IS: 516 - 1959 Methods of Tests for Strength of Concrete Cl.5

Date of test : 15/03/2018

Sl. No.	Identification Mark	Grade of concrete	Date of Casting	Date of Testing	Dimension of the Specimen (mm)	Cross sectional area (Sq.mm)	Weight of the sample (kg)	Failure Load (KN)	Compressive strength (N/mm^2)	Average Compressive Strength (N/mm^2)
1	PCC	M15	08/03/2018	15/03/2018	150.86 X 149.97 X 149.53	22625	8.347	280.1	12.4	12.5
2	PCC	M15	08/03/2018	15/03/2018	149.57 X 149.63 X 151.64	22380	8.270	281.7	12.6	
3	PCC	M15	08/03/2018	15/03/2018	150.67 X 149.34 X 149.54	22501	8.266	280.9	12.5	

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TEST REPORT OF CEMENT CONCRETE CUBES

Lab ID : **CP-2018-03-12-16** **Date: 05/04/2018**

Customer : Assistant Executive Engineer, Shettyhalli Sub Division, BBMP, Bangalore.

Address : Shettyhalli Sub Division, BBMP, Bangalore.

Project Name : Improvements of Mallasandra Govt School Compound other Development works in Mallasandra ward no. 13, Shettyhalli Sub division.

Agency : Technical Manager, KRIDL, No.280, 59th Cross, 17th 'C' Main road, 3rd 'Y' Block Rajajinagar, Bangalore-560010

Customer's Reference : BBMP/EE/PD/WO/0035/2017-18

Source of Sample : Sample supplied by Agency

Sample Condition : Satisfactory

Date of Receipt : 12-03-2018

Sample ID No : 2018-03-12-16 /02

Customer ID : PCC

Sample Type /Size : 150X150X150 mm

Sample grade/Age : M15 / 28 Days Compressive Strength

Reference to BIS codes : IS: 516 - 1959 Methods of Tests for Strength of Concrete Cl.5

Date of test : 05/04/2018

Sl. No.	Identification Mark	Grade of concrete	Date of Casting	Date of Testing	Dimension of the Specimen (mm)	Cross sectional area (Sq.mm)	Weight of the sample (kg)	Failure Load (KN)	Compressive strength (N/mm^2)	Average Compressive Strength (N/mm^2)
1	PCC	M15	08/03/2018	05/04/2018	151.42 X 151.16 X 149.35	22888	8.530	406.4	17.8	17.5
2	PCC	M15	08/03/2018	05/04/2018	150.02 X 149.40 X 152.00	22413	8.220	390.2	17.4	
3	PCC	M15	08/03/2018	05/04/2018	151.69 X 149.07 X 151.35	22612	8.541	393.7	17.4	

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TEST REPORT OF PHYSICAL PROPERTIES OF CEMENT - 53 Grade

Lab ID	:	**CP-2018-03-05-14** **Date: 08-03-2018**
Customer	:	Assistant Executive Engineer, Shettyhalli Sub Division, BBMP, Bangalore.
Address	:	Shettyhalli Sub Division, BBMP, Bangalore.
Project Name	:	Improvements of Mallasandra Govt School Compound other Development works in Mallasandra ward no. 13, Shettyhalli Sub division.
Agency	:	Technical Manager, KRIDL, No.280, 59th Cross, 17th 'C' Main road, 3rd 'Y' Block Rajajinagar, Bangalore-560010
Customer's Reference	:	BBMP/EE/PD/WO/0035/2017-18
Source of Sample	:	Sample supplied by Agency
Sample Condition	:	Satisfactory
Date of Receipt	:	05-03-2018
Sample ID No	:	2018-03-05-14 /01
Sample Type	:	Birla Super 53grade
Reference to BIS codes	:	IS 12269 : 2013, 53 Grade Ordinary Portland cement Specification , IS 4031 (Part 1,2 3,4,5, 6,11):1988 IS 4031 Part 1 DETERMINATION OF FINENESS BY DRY SIEVING, Clause 4.4 IS 4031 Part 2, Determination of Fineness by Blaine Air Permeability Method, Clause 5 IS 4031 Part 3, Determination of Soundness, Clause 5,Clause 6 IS 4031 Part 4, Determination of Consistency of Standard Cement Paste, Clause 5 IS 4031 Part 5, Determination of Initial & Final Setting Time, Clause 5 IS 4031 Part 11,DETERMINATION OF DENSITY , Clause 6
Date of test	:	06-03-2018
Environmental Conditions during test	:	Temperature: 26°C Humidity: 72%

Sl.No.	Physical properties	Results	Requirement as per IS 12269: 2013
1	Fineness by dry sieving (%)	2.55	–
2	Finess by Air permeablity method (m^2/kg,Min)	275.5	225m^2/kg, Min
3	Density (gm/cc)	3.11	–
4	Standard Consistency (%)	27.0%	Not specified
5	Initial Setting time (minutes)	165 minutes	Not less than 30 minutes
6	Final Setting time (minutes)	255 minutes	Not more than 600 minutes
7	Soundness (Le Chatelier's Method) (mm)	2.0mm	Not more than 10 mm

Note:

The results pertain to the samples received and tested.

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TEST REPORT OF PHYSICAL PROPERTIES OF CEMENT - 53 Grade

Lab ID	:	**CP-2018-03-05-14** **Date: 03-04-2018**
Customer	:	Assistant Executive Engineer, Shettyhalli Sub Division, BBMP, Bangalore.
Address	:	Shettyhalli Sub Division, BBMP, Bangalore.
Project Name	:	Improvements of Mallasandra Govt School Compound other Development works in Mallasandra ward no. 13, Shettyhalli Sub division.
Agency	:	Technical Manager, KRIDL, No.280, 59th Cross, 17th 'C' Main road, 3rd 'Y' Block Rajajinagar, Bangalore-560010
Customer's Reference	:	BBMP/EE/PD/WO/0035/2017-18
Source of Sample	:	Sample supplied by Agency
Sample Condition	:	Satisfactory
Date of Receipt	:	05-03-2018
Sample ID No	:	2018-03-05-14 /01
Sample Type	:	Birla Super 53grade
Reference to BIS codes	:	IS 12269 : 2013, 53 Grade Ordinary Portland cement Specification , IS 4031 Part 4, Determination of Consistency of Standard Cement Paste, Clause 5 IS 4031 Part 6, Determination of Compressive Strength, Clause 6
Date of test	:	06-03-2018
Environmental Conditions during test	:	Temperature: 26°C Humidity: 72%

Compressive Strength

Sl.No.	Physical properties	Results (N/mm^2)	Requirement as per IS 12269: 2013
1	3 Days	29.5N/mm2	Not less than 27 N/mm^2
2	7 Days	37.5N/mm1	Not less than 37 N/mm^2
3	28 Days	54.5N/mm2	Not less than 53 N/mm^2

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